

US Serial No. 10/828,422
Response to Office Action of April 27, 2006
Page 2 of 12

Listing of Claims

1. (currently amended) A steering wheel assembly comprising:
an armature, an air bag module, an electrical switch, and an air bag module retention system including at least one foot and at least one spring having at least one engagement portion; wherein said at least one spring engagement portion is sufficiently configured to retain said at least one foot in a snap-fit engagement thereby to fasten the air bag module to the armature; wherein said at least one spring is sufficiently configured to bias the air bag module in a first position in which the switch is open; and wherein said at least one spring is configured to deform upon sufficient application of force to the air bag module thereby to allow movement of the air bag module to a second position in which the switch is closed.
2. (original) The steering wheel assembly of claim 1, wherein the retention system further includes at least one surface and at least one member, and wherein said at least one surface is sufficiently configured and positioned to prevent rotation of the air bag module with respect to the armature by restricting relative movement between said at least one member
5 and said at least one surface.
3. (original) The steering wheel assembly of claim 2, wherein said at least one surface is sufficiently configured and positioned to prevent radial movement of the air bag module with respect to the armature by restricting relative movement between said at least one member and said at least one surface.
4. (original) The steering wheel assembly of claim 1, wherein said at least one spring defines a slot for receiving said at least one foot during snap-fit engagement of said at least one foot.

US Serial No. 10/828,422
Response to Office Action of April 27, 2006
Page 3 of 12

5. (currently amended) The steering wheel assembly of claim 1, wherein said at least one foot defines a lead-in surface and a notch; wherein ~~the air bag module retention system further includes~~ said at least one engagement portion is operatively connected to said at least one spring; and wherein the air bag module retention system is sufficiently configured so that the air bag module is operatively connectable to the armature by (1) causing the lead-in surface of said at least one foot to contact a respective one of said at least one engagement portion, and (2) exerting a force on the air bag module to cause deformation of said at least one spring and movement of said at least one engagement portion along the corresponding lead-in surface and into the corresponding notch.

6. (currently amended) The steering wheel assembly of claim 5, further comprising a reaction surface, and wherein the ~~spring element~~ is sufficiently configured so that, when said force is exerted on the airbag module, a portion of the ~~spring element~~ deflects to contact the reaction surface to restrict inward movement of the portion of the ~~spring element~~ during insertion.

7. (original) The steering wheel assembly of claim 1, wherein the airbag module retention system includes at least one member sufficiently positioned to restrict outward movement of said at least one engagement portion thereby to restrict outward movement of the air bag module.

8. (currently amended) The steering wheel assembly of claim 1, wherein one of the airbag module and the armature is configured for snap-fit engagement with said at least one ~~spring element~~ prior to assembly of the airbag module and the armature.

9. (currently amended) The steering wheel assembly of claim 1, wherein said at least one ~~spring element~~ includes a feature attached thereto for engagement with a tool to deflect the spring element.

US Serial No. 10/828,422
Response to Office Action of April 27, 2006
Page 4 of 12

10. (currently amended) The steering wheel assembly of claim 1, further comprising a conductive path for a horn circuit operatively connected to said at least one switch; wherein one of the armature and the air bag module defines a notch through which a portion of the conductive path extends; and wherein said at least one spring ~~element~~ and the armature
5 cooperate to retain the portion of the conductive path in the notch.

11. (currently amended) The steering wheel assembly of claim 1, further comprising a travel stop to restrict inward movement of the air bag module to thereby limit the force that may be applied to said switch.

12. (currently amended) The steering wheel assembly of claim 1, wherein the steering wheel armature is sufficiently shaped so that it is formable ~~with an upper tool, a lower tool, and without a slide.~~

13. (currently amended) The steering wheel assembly of claim 1, wherein the air bag module includes a structural portion, and wherein the structural portion is sufficiently shaped so that it is formable ~~with an upper tool, a lower tool, and without a slide.~~

14. (currently amended) A method of assembling a steering wheel comprising: configuring a steering wheel armature to support a horn switch and to receive an air bag module; and

employing at least one spring element to provide a snap-fit retention of ~~the said~~
5 air bag module to the steering wheel armature, said at least one spring element configured to bias the air bag module in a first position in which a switch is open, and configured to allow selective movement of the air bag module to a second position with respect to the armature to close the switch; and

assembling said air bag module to said steering wheel armature via the said snap-
10 fit retention provided by said at least one spring element; wherein one of the air bag module and the armature is configured for snap-fit engagement to said at least one spring element prior to
said assembling said air bag module to said steering wheel armature; wherein the method further

US Serial No. 10/828,422
Response to Office Action of April 27, 2006
Page 5 of 12

comprises connecting said horn switch and a conductive path to said armature, the conductive path being operatively connected to said horn switch; and wherein snap-fit engagement of said at
15 least one spring element to the armature prior to said assembling said air bag module to said steering wheel armature provides retention of said horn switch and the conductive path to said armature.

15. (cancelled)

16. (cancelled)

17. (cancelled)

18. (currently amended) The method of claim 14, wherein said armature is moldable or castable.

19. (currently amended) The method of claim 14, wherein said air bag module includes a moldable or castable structural portion.

20. (original) A steering wheel assembly comprising:
an armature, an air bag module, an electrical switch, and an air bag module retention system including at least one foot and at least one spring, wherein said at least one spring is sufficiently configured to retain said at least one foot in a snap-fit engagement thereby
5 to fasten the air bag module to the armature, wherein said at least one spring is sufficiently configured to bias the air bag module in a first position wherein the switch is open, and is configured to deform upon sufficient application of force to the air bag module thereby to allow movement of the air bag module to a second position wherein the switch is closed;
wherein the retention system further includes at least one surface and at least one
10 member, and wherein said at least one surface is sufficiently configured and positioned to prevent rotation of the air bag module with respect to the armature by restricting relative movement of said at least one member with respect to said at least one surface; and

US Serial No. 10/828,422
Response to Office Action of April 27, 2006
Page 6 of 12

wherein said at least one foot defines a lead-in surface and a notch; wherein the
air bag module retention system further includes at least one engagement portion operatively
15 connected to said at least one spring; and wherein the air bag module retention system is
sufficiently configured so that the air bag module is operatively connectable to the armature by
(1) causing the lead-in surface of said at least one foot to contact a respective one of said at least
one engagement portion, and (2) exerting a force on the air bag module to cause deformation of
said at least one spring and movement of said at least one engagement portion along the
20 corresponding lead-in surface and into the corresponding notch.